

## FISH AND WILDLIFE MANAGEMENT (APPENDIX D)

### 1. Introduction.

#### 1.1 Purpose.

1.11 General. The objective of this Fish and Wildlife Management Plan is to provide habitat capable of supporting the populations and the diversity of wildlife species needed for the use and enjoyment of the public, consistent with the joint-use objectives of the lake project. Non-consumptive uses of wildlife, such as observations, and photography, will receive equal considerations with that of consumptive uses, such as hunting.

1.111 The potential for wildlife enhancement in any environment is determined by a complex combination of the biotic communities as influenced by both soil and climatic factors. Intensive agriculture, heavy public use, and the lack of funds and manpower for manipulating the habitat will contribute to limiting the wildlife habitat.

1.12 Applicability. The wildlife management plan described herein applies only to all lands owned in fee by the Corps of Engineers at Coralville Lake.

#### 1.13 Responsibility.

1.131 In 1959, the Secretary of the Army, under authority of Section 4 of the Act of Congress, approved 22 December 1944, as amended (76 Stat. 1193; 16 U.S.C. 460D), and Section 3 of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended, 16 U.S.C. 661 et seq.), granted to the State of Iowa by and through the Iowa Conservation Commission a license for a period of 25 years. This license, contract No. DA-11-117-CIVENG-60-93, gives the Iowa Conservation Commission authority for implementing, operating, and managing a fish and wildlife management program for a total of 13,048 acres which includes an approximate 1200-acre wildlife refuge. The Iowa Conservation

Commission submits an annual management plan to the Corps of Engineers which includes personnel requirements, budget, hunter and fisherman use and harvest, and proposed developments. All hunting on Corps and State managed land is under jurisdiction of the Iowa Conservation Commission.

1.132 The Iowa Conservation Commission controls the management of the fisheries resource of Coralville Lake and Lake Macbride. The fisheries management program is under the supervision of an Iowa State Fisheries Biologist located at the Lake Macbride Fisheries Station. The fisheries management program is geared to provide a greater variety of fishing opportunity by using techniques to favor primarily the native fish species.

1.133 The Recreation-Resource Management Branch, Operations Division, in association with the Environmental Analysis Section of the Planning and Reports Branch, is responsible for preparation and administration of the Fish and Wildlife Management Appendix to the Master Plan. Coordination with the Rock Island District wildlife biologist is required for tract prescription preparation. The Coralville Lake Park Manager is responsible for the implementation of the prescriptions. This Appendix will be reviewed annually and revised as deemed necessary. Preparation of the prescriptions, and appendix review and revision will be coordinated with appropriate District elements.

## 2. Fish and Wildlife Resources.

### 2.1 Wildlife.

2.11 A wide variety of game and non-game bird and mammal species use project lands. After approval of the Fish and Wildlife Appendix, Coralville personnel will have to inventory and catalog the wildlife species that use the area. There are 274 species of birds which have a geographical range which includes the project area, including 115 transients, 58 winter residents, 115 summer residents and 29 permanent residents. This list contains, but is not limited to, waterfowl, shorebirds, birds of prey, and upland game birds.

2.12 Fifty-one species of mammals are believed to be included in the project area. Of these, 10 are classed as game animals and 15 are considered furbearers in Iowa. The game animals in the area are deer, eastern cottontail, jackrabbits, coyote, grey fox, red fox, raccoon, fox squirrel, gray squirrel, and woodchuck. The furbearers which inhabit this area are beaver, muskrat, raccoon, three species of weasel, mink, opossum, badger, striped skunk, spotted skunk, red fox, grey fox, woodchuck and coyote.

2.13 Complete species lists and additional details such as habitat preference, abundance, resident status, etc. can be found in the Final Environmental Impact Statement and/or Environmental Assessment for Coralville Lake and the Downstream Area of Influence to Columbus Junction, Iowa. Both are on file at the Rock Island District Office.

2.14 The bald eagle and possibly the peregrine falcon, both of which are listed as endangered species by the U.S. Fish and Wildlife Service, migrate through the project area. One endangered mammal species that may occur in the Coralville Lake area is the Indiana bat. No specific management practices are proposed for these species.

## 2.2 Fish.

2.21 The Iowa Conservation Commission has studied the fish populations of Coralville Lake in conjunction with improving the sport fishery and developing a commercial fishery since its impoundment in 1958. Efforts in recent years were directed primarily toward increasing the commercial harvest to reduce rough fish populations. Additionally, the gizzard shad (Dorosoma cepedianum) has recently been introduced to fill the void left by the recent commercial harvest of rough fish and thereby improve the forage base for game fish.

2.22 Initially (1959), fish populations of the lake were characteristic of the original river habitat with 84 percent of the total number consisting of carp (Cyprinus carpio), carpsucker (Carpiodes sp.), bullhead (Ictalurus sp.), and buffalo (Ictiobus sp.); while the remaining 16 percent

consisted of largemouth bass (Micropterus salmoides), channel catfish (Ictalurus punctatus), crappie (Pomoxis sp.), walleye (Stizostedion vitreum), and sunfish (Lepomis sp.). To improve the ratio of game to rough fish, stocking of game and predatory species was initiated in 1959.

2.23 The water quality of Coralville Lake has been monitored under contract with the University of Iowa, Iowa City, since the project was put into operation in October 1964. Pesticide analyses of fish and bottom sediment samples were initiated in 1976. Pesticide accumulation appears to be the only major water quality problem of Coralville Lake at this time. In fact, based on the suggestion of the U.S. Environmental Protection Agency, the ICC has prohibited all commercial fishing at Coralville Lake as of July, 1976. This will likely have an adverse impact on the game fish of Coralville Lake.

2.24 A complete species list and other fisheries information is contained in tables 1 through 7 of the Final Environmental Impact Statement and/or Environmental Assessment for Coralville Lake and the Downstream Area of Influence to Columbus Junction, Iowa. Both are on file at the Rock Island District Office.

### 3. Plan of Operation.

#### 3.1 General Statement.

3.11 The main function of Coralville Lake is flood control. Flood control activities are more frequent during the spring months. The spring flood control function exerts an adverse effect on the development of desirable fish spawning conditions, wildlife nesting, and food and cover producing vegetation.

3.12 In general, wildlife habitat enhancement practices will seek to improve the present habitat of game species while simultaneously having a favorable effect on all non-game animals and birds.



3.13 The importance of shrubs to wildlife is widely recognized. Wildlife management research has revealed that nearly one half of the 369 mammal species, and over one half of the 714 birds indigenous to North America are associated with wood cover, of which shrubs are an important component. In the forest understory and in fields and prairies, the presence of shrubs lead to niche diversification which permits a greater number of individuals and species to occupy the habitat. Besides providing food, shrubs supply necessary cover where wildlife can escape predators, rear young, or ward off the elements. An important function of this plan is to perpetuate and regenerate shrubs. This has been incorporated into the management practices in Exhibit 1.

3.14 Commercial timber production is not an objective of Coralville Lake's Forest Management Plan. Timber stand improvement (TSI) will be practiced to release or otherwise favor potential mast, or food and cavity producing trees. Examples of specific TSI for wildlife management will be selected thinning or non-food or non-den producing trees, which will open the area for better growth of more valuable tree species or shrub growth. Older trees with unsound limbs and trunks that are, or will provide cavities for cavity-using wildlife, such as squirrels, woodducks, woodpeckers, raccoons, and honey bees will be saved; except where their preservation would constitute a safety hazard.

### 3.2 Implementation.

3.21 The Fish and Wildlife Management Plan constitutes a short-range working program for Coralville Lake. Recommendations are based on present land use and existing development plans. Where intensive recreational development has or is going to occur only those wildlife practices compatible with heavy public use are prescribed.

3.22 Costs for implementing this Fish and Wildlife Management Plan are estimated by FY for the five-year operating cycle. The annual workload will depend on annual funding and availability of personnel. All estimates (see figure on following page) indicate percent costs and do not include

inflation. Management of the agriculturally leased tracts will not require any direct outlay of funds; however, a reduced income from these leases may result. Timber Stand Improvement and Clear Cuts should result in no expenditure; the Contractor would keep the lumber as payment.

### 3.23 Operational Cost of Implementation by FY.

#### FY 79

<u>What is to be done</u>	<u>Where</u>	<u>Costs</u>
Practice 9	Jolly Roger Area Tracts 415, 417, 418, 443 and 448	\$2000
Practice 9	Sugar Bottom nature area - Tracts 65, 61	\$1000
Practice 5	Sugar Bottom nature area - Tracts 65, 61	\$1200
Practice 14	Sugar Bottom nature area - Tracts 65, 61	\$ 800
Practice 1,9,5,12	Former Boy Scout Area Tracts 443 and 448	\$2000
	TOTAL	\$7000

#### FY 80

Practice 1,9	Hoosier Creek Basin N. gravel road Tracts 314, 334-336 338, 341, 348, 351	\$4200
Practice 4	" " " " " " " " "	\$ 800
Practice 14	Tract 348	\$7000
Maintenance of existing prairie and food plot areas		\$1000
	TOTAL	\$13,000

#### FY 81

Maintenance of existing prairie and food plots		\$1500
Practice 7	Sandy Creek Area Tract 420-423,	\$1700

424, 426

(if contract possible, use someplace else)

Practice 5	Tract 426	\$ 300
Practice 1,9,14	Completion of Wildlife practices in Hoosier Creek Basin	\$5000
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	TOTAL	\$8500

FY 82

Maintenance of existing area	Hoosier Creek Basin	\$1500
	Sandy Creek Basin	
	Sugar Bottom	
Appropriate wildlife practices		<u>\$7000</u>
	TOTAL	\$8500

FY 83

Maintenance of existing area	Hoosier Creek Basin	\$1500
	Sandy Creek Basin	
	Sugar Bottom	
Appropriate wildlife practices		<u>\$7000</u>
	TOTAL	\$8500

3.24 Since implementation is to occur over a 5 year period, an annual work plan, jointly prepared by the Reservoir Manager and the District Biologist, will be submitted by 1 February for approval by the Chief of the Recreational Resource Management Branch, Operations Division. The annual work plan shall outline the tract prescriptions being implemented and the materials, man-hours, funds, and time required to do so.

#### 4. Conclusions/Recommendations.

4.1 Posting of Wildlife Management Areas. Many areas of Coralville Lake which are not licensed to the ICC offer fine hunting opportunities. Some of these areas are not hunted because hunters are not aware that the land is public and open to hunting. Most sections of Iowa are seriously lacking available public lands to hunt on. It is our recommendation that sections of Coralville Lake open to hunting should be posted as a U.S. Army Corps of

Engineers Wildlife Management Area - Public Hunting. The public relations benefits received from this relatively inexpensive management practice will be extremely high. The primary area proposed for posting as a Corps Wildlife Management area is the Hoosier Creek Basin.

4.2 Termination of Grazing Leases. Much of the grass or pasture land is or should be allowed to go ungrazed for one or more of the following reasons.

- a. To prevent or retard soil erosion
- b. To improve herbaceous nesting and winter cover for certain game and non-game wildlife species.
- c. To allow understory development in existing forested areas.
- d. To protect reforestation efforts
- e. To allow the succession process to continue uninterrupted.
- f. To reestablish native grasses.
- g. The incapability to employ or enforce proper range management techniques such as rotational grazing, regulation of livestock numbers to meet carry capacity, location of water and salt to optimize livestock distribution, and utilization of forage during correct season to maintain plant vigor. The leases will be terminated when they expire.

## 5. Related Programs.

5.1 Hunting and Hunter Control. All hunting will be conducted within the rules, regulations, and jurisdiction of the Iowa Conservation Commission. Hunting is permitted on all Corps land with the exceptions as follows: wildlife refuges established by the Iowa Conservation Commission; all public campgrounds and picnic areas; and, within the vicinity of the dam and other structures and buildings. All non-hunting areas will be adequately posted as such. Project personnel will conduct a survey and maintenance check of all posted areas just prior to the hunting season. All enforcement of hunting regulations will be by Iowa Conservation Commission's Officers.

5.2 Aquatic Plant Control. Aquatic plant densities or distributions are not a problem at Coralville Lake. The Iowa water patrol personnel and Iowa Conservation Commission fisheries biologist will report any undesirable

aquatic plant beds to the Rock Island District Office biologist. The Rock Island District has initiated an aquatic plant control program which will monitor any aquatic plant problems in the District and maintain and update a working file of aquatic plant control techniques.

### 5.3 Vector Control.

5.31 When complaints from area users are received and/or when the Park Manager deems necessary, vector control will follow the District Pest Control Program. If the specific vector, such as mosquitoes, is not included in the district program, the activity will be contracted out.

### 5.4 Pest Control.

5.41 Information concerning major pest problems can be received from the Assistant State Supervisor of Wildlife Services for the U.S. Fish and Wildlife Service at Springfield, Illinois. Coralville Lake is not within his region; however, he is the nearest member of the Wildlife Services with pest control expertise. In addition, the Cooperative Extension Service at land grant colleges will provide pest control information.

5.42 To date, burrowing mammals, such as ground hogs (Marmota monax) and muskrats (Ondatra zibethica) and their burrows have not significantly affected the flood control dam. If burrows create a structural problem, a suffocant in the form of gas bombs, will be used to kill the animal in the burrow. The gas dissipates in a short time. The gas bombs are recommended by, and obtained from, the U.S. Fish and Wildlife Services, Division of Wildlife Services. Killing the animal with gas bombs is an immediate solution. If this problem persists, the preventative measure of trapping at the dam site will be employed.

5.43 Rats and mice are controlled in administrative areas by using "Warfarin" bait. Pest preventative measures are highly recommended; these include proper storage, collection, and disposal of refuse; removal of



debris, rubbish, and other material that serves as cover; and removal of brush and weeds in administrative and high-use areas.

5.44 Disease Control. Wildlife may often serve as reservoirs of diseases infective to man and domestic animals, also an epizootic may have detrimental effects on wildlife populations. Reports from biologists of the Iowa Conservation Commission indicate that no major disease or parasite problems now exist at Coralville Lake. Project personnel will be alert for signs of fish or wildlife disease outbreaks. Sick or dead specimens will be delivered to the appropriate U.S. Fish and Wildlife Service Laboratory. The Rock Island District Wildlife Biologist will be immediately notified of any problems and he will in turn notify the Area Biologist of the Iowa Conservation Commission. The public will be notified of serious disease outbreaks through standard media outlets and procedures.

## EXHIBIT 1

### WILDLIFE AND FORESTRY MANAGEMENT PRACTICES

Management practices for achieving wildlife and forestry management objectives are described in this exhibit.

These practices will be prescribed on a tract by tract basis in Exhibit 2.

Marking of trees for removal or the selection of trees for planting will, in all cases be coordinated with the District forester or wildlife biologist.

#### "Wildlife Practices."

Practice 1. Hedgerows. The low woody vegetation of hedgerows is the desired habitat of many songbirds. Hedgerows should be planted along walking trails, roadways, and field borders. The desired species are tatarian honeysuckle, autumn olive, witch-hazel, dogwood, or ninebark, as suited to the site. Hedgerows can be established by planting seedlings and providing protection to the new plants. Plants will be marked with flagging to facilitate mowing of adjacent areas. Shrub species should be used in these hedgerows in addition to the selected species. This will provide greater diversity for cover, travel lanes, food and songbird nests.

Practice 2. Roadsides. Roadsides provide excellent habitat when the vegetative diversity is sustained. Mature trees, shrubs, and uncut grass (the major "edge" components) should be promoted. Mowing, or burning of these areas should be limited. Approximately 1/4 of the distance between the tree edge and the road should be in grass. The remainder should be maintained in a shrub stage of succession by cutting once every 2 years.

Practice 3. Artificial Nesting. Artificial nesting structures can be

installed to promote area songbird use. These can be located on shade trees along the edge of the campground, picnic areas, or roadsides and walkways. Wood duck nesting structures should also be built. The construction and installation of these bird houses should be encouraged by interested groups such as the Boy or Girl Scouts, and environmental education groups.

Practice 4. Clump Plantings. Clump plantings in field corners and gullies of shrubs and vines are very attractive to birds. Clumps should be not less than ten square feet or one hundred square feet in area. The desired species are cedar, spruce, autumn olive, tatarian honeysuckle, wild grape, and bittersweet, as suited to the planting site.

Practice 5. Tractor Strips. These strips are areas where a tractor has plowed herbaceous cover (grasses and/or forbs) to modify succession. Lay the field out in five strips, each with a width of about 20-50 feet. Each year, plow a single strip; in sequence, such as 1-3-5-2-4. This alteration of plant succession will create a diverse source of food and cover. The exact location will be determined after a field investigation. This practice will be implemented under supervision of the project biologist or the District biologist.

Practice 6. Dead Tree Diversity. The mature forest is a necessary environment for many songbird species. Leave several dead trees, or kill two or three tall, unwanted trees per acre. Killing can be accomplished by "ringing" or girdling the trunk; that is, cutting the cambium layer in a strip two or three inches wide around the trunk, or by injecting the tree with 2-4-5-T. This practice will be implemented under the supervision of the project forester and biologist or the District Forester and Biologist.

Practice 7. Edge Habitat. The establishment of "edge" habitat is very important in game and non-game species management. Clear-cutting of patches of timber in dense timber stands will be very effective in establishing edge and retarding succession. Quarter-acre openings are considered as minimum

size. Size and shape will vary from site to site. The implementation of this practice will be under the guidance of the project forester and biologist or the District Forester and Biologist.

Practice 8. Marsh Habitat Development. Marsh areas provide high vegetative diversity resulting in extreme animal and bird diversity. Maintenance of marshland, no matter how small, is highly recommended. Small marsh areas can be created simply by constructing a dam, and/or levee system, across a small drainage area. These marsh areas should not be located too close to high public use areas due to the potential mosquito problem.

Practice 9. Tree Plantings. There are two primary purposes for tree plantings as a wildlife management tool. 1) to break up large, very open fields and for diverse vegetative habitat, and 2) to create windrows and groves for winter cover. These plantings will be accomplished under the supervision of the project forester and biologist or the District Forester and Biologist. A typical windrow might consist of a row of each of the following species: autumn olive, green ash, silver maple, white pine, and red cedar. There are many variations of windrow design. The specific design and species for an area will be described after an on-site inspection.

Practice 10. Timber Stand Improvement (TSI). Timber stand thinning can be implemented for the following purposes:

- a. To promote understory growth,
- b. To remove trees undesirable for wildlife,
- c. To promote desired tree species,
- d. To promote seed crop for mast tree production.

TSI will include providing for two or three dead cavity producing trees per acre. TSI will be completed under the supervision and guidelines of the project forester and biologist or the District Forester and Biologist.

Practice 11. Controlled Burns. Controlled burns can be used to regulate herbaceous plant species composition and density, and promote seed production. They are especially useful in establishing native grasses when time

and funds are limited. Controlled burns will be completed under the supervision and guidelines of the project forester and biologist or the District Forester and Biologist.

Practice 12. Food Plot Plantings. Food plantings are not considered a permanent solution to wildlife population problems. However, winter food may be the limiting factor in the carrying capacity of an area for wildlife. By adding available winter food on land that has sufficient cover and water, winter losses of game can be reduced. The long range solution, however, is to provide a natural plant community which can support the desired maximum population numbers of species throughout the entire winter. When recommended, the following food plot will be created under the supervision of the project biologist or the District Biologist. The exact location will be described after an on-site inspection, and should be evaluated in early spring.

- a. Size: 50 feet by 200 feet.
- b. Plow and disk the plot.
- c. Fertilize with 50 pounds of 12-12-12 as a minimum; further fertilization will require a soil test.
- d. The following seed mixture is recommended:
 

German Millet	1.5 lbs.
Cowpeas	1.0 lbs.
Soybeans	2.0 lbs.
Korean lespedeza	1.5 lbs.
Buckwheat	0.5 lbs.
<b>TOTAL</b>	<b>6.5 lbs. for 50'x200' plot (1/4 acre)</b>
- e. Plant no later than June 20th.
- f. Broadcast the seed mixture and disk lightly to cover.

Practice 13. Maintenance of Open Areas. Mow, spray, or cultivate the entire field or openings every other year or as necessary to prevent take over by woody vegetation. This practice should not be implemented before the 15th of June so as not to disturb ground nesting species.

Practice 14. Prairie Flora Management. Reestablish prairie flora in suitable areas for wildlife cover and the project's visitors interest.



The following practices will be an addition to the Land Use Regulations (reference Exhibit 4) set forth in all agricultural leases administered by the Real Estate element on project lands.

Practice 15. Farming Operations.

- a. No wetlands, including low areas in fields which are wet only periodically during the year, shall be ditched, drained, filled or burned.
- b. When farming along the edge of a creek or other body of water, leave 30 feet of natural vegetation. For agricultural purposes, the Coralville Lake shoreline will be described as 695 feet m.s.l.
- c. When farming along a field division fence or road, leave 15 feet of natural vegetation on each side.
- d. Public hunting will be allowed on all agriculturally leased lands, which are not contingent to high density public use areas.

Practice 16. Haying Operations.

- a. No hay shall be cut prior to 15 June of each year.
- b. Do not make the first or last cut of the season on the outer 2-3 swaths (approximately 30 feet) of any designated field edges or sides.

Practice 17. Cash Crop Harvesting Operations. Leave the outer four rows of the crop unharvested on designated edges. When harvesting grain, leave a minimum of one swath of crop unharvested on designated edges.

Forestry Practices.

Practice 1.

- a. Regenerate Lost Trees. Plant balled and burlapped or containerized native deciduous tree species to accomplish regeneration of individual trees lost to either death or removed because of disease or insect infestations.
- b. Landscaping. Plant balled or burlapped or containerized native deciduous tree species to accomplish the proposed plantings as shown in the site layouts in Volume II of the Resource Master Plan. Plant the native

tree species which are adapted to the site and are wind-firm species. Select those species which are the most tolerant of soil compaction. The species should be arranged to provide the individual camp unit screening to produce a natural wooded setting for privacy.

c. Interpretative/Sensory Plantings. This practice is the same as b, except the species will emphasize sound, touch, and smell, as well as visual interest. This practice will be implemented along the trail specifically designed for handicapped use. The species which produce unique sounds, display varying textures on the leaves and bark, emit odors either through natural pores or wounds from minor injuries.

d. Screen Plantings. Plant balled and burlapped, containerized, and/or bare rooted coniferous species to accomplish the screening of park facilities, screening of operation and maintenance facilities, and sewage lagoons.

#### Practice 2. Tree Maintenance.

- a. Remove hazardous trees.
- b. Prune to improve the aesthetical appeal of individual trees.
- c. General maintenance practices; such as fertilizing, spraying, removing disease or insect infected portions, fill-in voids, and sealing mechanical injuries, will be accomplished to improve growth and maintain healthy condition in existing tree species in the intensively maintained areas.

Practice 3. Vista Maintenance. Trees that obstruct a scenic vista adjacent to developed recreation areas will be thinned to 50 feet basal area. The lower branches or the remaining trees will be pruned up to half the total height. Only branches that are less than one-fourth the diameter of the trunk at the point of attachment will be removed. Branches larger than this size will remain to avoid an unaesthetically pleasing scar or a deformed tree. This pruning will cause adventitious sprouting of branches. These branches will be removed periodically. All pruning cuts will be painted to prevent entrance of disease and insects.

Practice 4. Tree Thinning. Trees that are adjacent to developed recrea-

tion areas but don't obstruct a scenic vista will be thinned to 80 feet basal area.

Practice 5. Coniferous Species Below 700 Feet. All coniferous species below 700 feet m.s.l. will be removed.

Practice 6. Shade Selection. Selection of species to be thinned will be governed by shade producing qualities. Mast producers will be given secondary consideration. Long-lived trees that have good shading characteristics will be kept.

Practice 7. Canopy Selection. Selection of species in relation to canopy position that will be removed will be as follows: First - suppressed understory species; Second - intermediate, excluding shade tolerant species; Third - codominant and dominant species (species selection in each canopy level is governed by Forestry Practice 6).

Practice 8. Reforestation Below 712 Feet m.s.l. Open areas above 712 feet m.s.l. may be reforested in coniferous species. Sites that are flat to gently sloping with a deep rich soil and an aspect of south or west will be planted in white pine. Sites that are moderately sloping or with a shallow soil as a result of past erosion will be planted in red pine. Red pine will be planted on sites with north or east aspects. Sites that have severe erosion problems will be planted in jack pine. Appropriate natural deciduous species could be used where deemed suitable, such as oak or walnut.

Practice 9. Reforestation Above 712 Feet m.s.l. Open areas below 712 feet m.s.l. will be reforested in deciduous species, except red mulberry, hawthorn, honey locust, and box elder. The species selection is dependent on soil and aspect. All trees will be of sufficient height to avoid complete inundation at 712 feet m.s.l. To acquire stock of sufficient height, seedling will be planted in a temporary nursery above 712 feet m.s.l. immediately adjacent to the proposed planting site. After the desired height is attained the saplings will be transplanted by the District's Vermeer tree

planter. Species selection will be made by the forester from the District's headquarters until a forester is acquired on the staff at Coralville Lake.

Practice 10. Screening. Recreation area screening will be provided between developed recreation areas and adjacent roads by establishing 5 rows of seedling size plantings. The first row, adjacent to the road, should contain eastern red cedar spaced 10 feet apart; the second row white pine spaced 12 feet apart; the third row silver maple spaced 12 feet apart. The fourth row should contain green ash spaced 10 feet apart, and the last row next to the recreation area should contain autumn olive spaced 5 feet apart. The first four rows should be 12 feet apart; spacing between the green ash and autumn olive should be six feet.

These row plantings will provide both screening from users of the recreation area from the road users and will provide reduced noise level in the campground caused from vehicular traffic. The dust created on gravel roads adjacent to recreation areas will be collected in the row plantings.

b. Buffer Screening. Screening in the form of buffer strips will be utilized in campground areas near and between some of the camping spurs. This screening will create buffers that will furnish a sense of privacy for the person or the family utilizing a spur. The buffer would also reduce the noise and odor that would be directly related to the use of adjacent restrooms, play areas, etc.

Species chosen for campground buffer strips will be those shrub species which provide dense screening during the summer recreation season. Included in these plantings will be shrub species which will provide food and cover for birds and other smaller forms of wildlife during the late fall, winter, and early spring months.

Forms of species that form thick, dense walls of vegetation that act as a deterrent to public access should be planted in areas where restricted access is desired. This practice would be used in such areas as sewage lagoons, dangerous areas such as gullies or gorges, to protect delicate wildlife areas and for other security purposes.

Practice 11. Cleaning. A cutting made in a young stand, not past the sap-



ling stage, for the purpose of freeing trees from other individuals of similar age but of less desirable species or from which are overtopping them, or likely to overtop.

Practice 12. Clearcutting. Removal of the mature timber in one cut for harvest or diversification purposes. (1) There are two techniques for timber reproduction following clearcutting. Artificial reproduction, reproduction after cutting obtained artificially by direct seeding or by planting, (2) Natural reproduction, regeneration after cutting obtained by seeding in from the marginal stand or from trees cut in the clearing operation.

Practice 13. Improvement. A cutting made in a stand past the sapling stage for the purpose of improving its composition and character, by removing trees of less desirable species, form and condition in the main crown canopy.

Practice 14. Liberation. A cutting made in a stand of sapling stage, for the purpose of freeing the young trees from older individuals that are overtopping them.

Practice 15. Regeneration or Reproduction. Any cutting intended to invite or assist regeneration.

Practice 16. Sanitation. A cutting made to remove trees killed or injured by fire, insects, fungi, or other harmful agencies (and sometimes trees susceptible to such injuries), for the purpose of preventing the spread of insects or disease.

Practice 17. Selection. Removal of mature timber, usually the oldest or largest trees, either as single scattered trees or in small groups at relatively short intervals, commonly 5 to 20 years, repeated indefinitely, by means of which the continuous establishment of natural reproduction in the stand is encouraged and an uneven-aged arrangement of ages is maintained.

Practice 18. Thinning. A cutting made in an immature stand for the purpose



of increasing the rate of growth or improving the form of the trees that remain and increasing the total production of the stand.

Practice 19. Lopping and scattering. Lopping the slash soon after logging and spreading it more or less evenly over the ground, without burning. Lopping may be done without scattering.

Practice 20. Piling Slash. Piling the lopped slash at the time of logging to create wildlife cover for escape, resting, and protection for climatic factors.

## EXHIBIT 2

### TRACT BY TRACT PRESCRIPTIONS

Tract #A-1, #A-2, #A-4, #A-5, #A-8

Photo 75-CR-A1

1. Description. These tracts are all recreation areas, with groves of dense upland hardwood, mixed bottomland and upland hardwood, or dense bottomland hardwood. Excellent edge habitat exists.

2. Prescription.

a. Follow Forestry practices 1a, 1b, 1c; 2a, 2b, 2c; 3; 4, 6; 7, 10a, 10b; for Linder Point, West Overlook, Tailwater area, and Turkey Creek area. Follow practices 8, 9 on class IV lands. Otherwise allow area to vegetate through natural succession.

b. Follow Wildlife Practice 10 on class II B lands of tracts A-2 and A-5. Practices 2 and 3 should be employed along campgrounds, picnic areas, and roadsides of all the tracts.

Part of A4 and A8 leased to the University of Iowa. We recommended no treatment. Management plans of the University will be applied here. The area in A8 leased to Vern Eden for commercial purposes will have no practices suggested for it.

Tracts #B-104, 100 and  
108 A portion of B #105

Photo 75-CR-C2

Much of the entire area both tracts is medium density hardwoods with scattered openings. Large bay extends east into Tract B-104.

2. Prescription. For Tracts B-104, B-100, B-108 and part of B-105; Class

III lands follow Forestry practices 13, 17, and 20; and Wildlife practices 2, 7, and 10. Forestry practices 1a, 1b; 2a, 2b, 2c; 3; 4; 5; 6; 7; 8; 9 on Class II B lands.

Tracts -

A portion of B 104

B 105-107, 115, 117, 118, 120-125, 167

Photo 75-CR-C2

All these lands are leased to the University. We recommended that the University management practices be applied.

If the lease is not renewed the following practices will be applied, if the lands revert to Corps management. The land probably will be classed as a recreation area. We recommend that this area be used for primitive camping and other low density recreational activities. For Practices 1a, 1b; 2a, 2b, 2c; 3; 4; 6; 7; 8; 9 if area classed as a high density recreation area, otherwise follow Forestry Practices 8, 9 and Practice 17 in the mature timber.

Tracts

Photos 75-CR-C1, 75-CR-D1,

75-CR-D2, 75-CR-E1, 75-CR-E2

E

B

D

104 (part) of  
126-129, 132, 133  
136-153, 155-159

409, 412

162, 164, 165

300-306

This land is leased to the state. It is now a part of Lake Macbride State Park. We recommend that their Master Plan be carried out.

Tracts #A24, 25, 17, 16, 9, 10, 12

Photo 75-CR-A1

We recommend no treatment on the Class VI lands that are leased to the University. Management plans of the University will be applied here.

Tract #26

Photo 75-CR-A1

This tract is vegetated with upland hardwood. Natural succession and selection will be allowed to occur.

Tract A-28

Photo 75-CR-A1

2. Prescription.

a. Delete from Agricultural lease. Follow Forestry practices 1a, 1b, and 2a, 2b, 2c for Class II B portion. Class IV is included in natural area selection and succession.

Tract #A-30 and #A-34

Photo 75-CR-A1

1. Description. This area is described as Squire Point. The area is vegetated with a dense stand of natural upland hardwoods.

2. Prescription.

a. Follow Forestry practice 13.

b. Follow Wildlife practices 6 & 7 in the north central section of Tract A-30.

Tract #A-52(PT)

Photo 75-CR-B2

1. Description. 40 acres. The tract is bordered on the north, east and south by the reservoir. Extensive (approximately 150 acres) of hardwood timber borders this tract on the west. A large peninsula of open agricultural land extends from east to west.

2. Prescription.

a. Forestry practice 17 group or 12 should be implemented to open the tree canopy near agricultural areas. Follow Forestry Practice 8, 9 in open area.

- b. Follow wildlife practice 12, 13, and 14 on openings in the tract.

Tracts	<u>A</u>	<u>B</u>
	A-36, 40, 42, 43, 45, 47	B-102
	A-53, 69	
	A-71, 74, 75, 77, 78	
	A-82, 83	

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These tracts are basically shoreline area and inlets vegetated with small areas of upland hardwoods. Allow natural succession to proceed.

Tracts #B 109, 100, 111

Photo 75-CR-C2

Class VI lands will have no treatment.

On the Class IV lands on Tracts B-111, B-109, and B-110; below elevation 712 - natural succession.

Above elevation 712 follow wildlife practice 2 along roadsides and vegetate by natural succession and 13 on abandoned agricultural land or open areas and follow forestry practice 17 group in mature timber.

Tracts #E-401, 406, 408, 409, 411, 412, 414

Photo 75-CR-C2

B-114

No treatment will be applied. Natural succession will follow here. Follow wildlife practice 7 on the south portion of Tract E-402.

Tract #410

Photo 75-CR-D2

Tract has many irregular fingerlike draws extending from a bay at north boundary. Each draw has scattered shrubs and timber. Westernmost N-S section is in medium density upland hardwoods.

Follow forestry practice 9.



Follow wildlife practice 9 along south boundary.

Tract E-415

Photo 75-CR-D2

1. Description. Predominately open field with bay extending west in north-east corner tract. Some scattered bottomland hardwoods present in draw extending from a bay in southwest corner. Irregular shoreline.
2. Prescription. Follow wildlife practice 9 along west boundary and employ natural vegetative succession and 5 on remainder of the tract.

Tracts #E-417, E-418, E-443, and E-448

Photo 75-CR-D2 & D3

1. Description. Ninety percent of this area is in open field. Some narrow strips of timber exist along field lines and in draws. A tree planting plan has been developed for this area.
2. Prescription. Follow Forestry practices 1a, 1b, 1c; 2a 2b, 2c; 4; 6; 7; and 9. Follow Wildlife practices 1, 2, 3, 9, 5, and 12.

Tract A-37

Photo 75-CR-A1

1. Description. Agricultural lease field No. 1. 60 acres. Fifty percent in open pasture with spotty trees. Northwest corner has denser tree stand. South boundary is bordered by a bay, with the east 1/2 in open savanna and the west 1/2 in open upland hardwoods. Portions of tract in both Class II B and IV.
2. Prescription.
  - a. Class IV portion: natural selection. Class II B portion: Forestry practice 1a, 1b, 1c; 3; 4; 6; and 7.
  - b. Follow wildlife practice 11 or 14 on portion of tract extending eastward.

South Portion Tract A53, A54, 55, 57, A41

Photo 75-CR-B1

Forest Practice

Follow in Class II B lands

Forest Practice 1a, 1b, 1c; 2a, 2b, 2c; 3; 4; 5; 6; 7; 9; 10 except  
portion

A53 follow 21 and Class IV lands.

Follow Wildlife practices 2 and 13 on tracts 54, 55, and 57. Practice 7 on  
south part of A-53.

Tracts A-60, A-61

A-62

Photo 75-CR-B1

1. Description. Predominately open with a band of mixed deciduous extending north and south along a draw on the east boundary.

2. Prescription.

a. Follow Forestry practices 1a, 1b

b. Follow Wildlife practice No. 5, 12 and 14 on tract A-61.

Rest of tract A53

South portion tract A67

Tract A68

Photo 75-CR-C2

This tract is Sugar Bottom recreation area.

Forest practice 1a, 1b, 1c; 2a, 2b, 2c; 3; 4; 5; 6; 7; 10

Wildlife practices 1, 2, 3, and 13

Tracts A-65, A-66 and portion of Tract 67Photo 75-CR-B2

1. Description. North of the entrance road to Sugar Bottom is medium density upland hardwoods. South of that road the hillsides of the North-south ridge are timbered while the ridgetop open meadow.
2. Prescription. Follow forestry practices 1a, 1b, 1c; 2a, 2b, 2c; 3; 4; 6; 7; 8; 9. Follow wildlife practices 2, 5, 13, 14, and 12.

Tract except Class VI land#B-104, B-100, B-108, 105Photo 75-CR-C2

1. Description. Tract B-104 is within both Class III and IV while Tract B-100 is within both Class II B and III. Virtually the entire area of both tracts is medium density upland hardwoods within scattered openings. A large bay extends east into Tract B-104.

Tract #D-308Photo 75-CR-D2

This land is vegetated with upland hardwood so no treatment will be applied. Natural succession will be allowed to occur.

Tracts #D-309, #D-317 and #E-424Photo 75-CR-E2

1. Description. All land open, within the 712 elevation, and ninety percent in agricultural production. An east-west open creek draw divides the northern portion of Tract D-309. The westernmost portion of Tract E-424 is timbered.
2. Prescription. Follow Wildlife practices 1 and 9 for divisions to create 5-10 fields. Follow Wildlife practice 4 for all field corners. Follow Wildlife practices 15 and 17 for all field edges. Follow forestry practice 10.

Tracts #D-310, #D-314, #D-315, #D-316Photo 75-CR-E2

1. Description. Lands above the 712 m.s.l. elevation are in meadow, while the remainder is in shrub and sapling of bottomland species. The north-western portion of D-310 is a boat launching site. The extreme south-western portion of D-310 is a narrow band of hardwoods.

2. Prescription. Follow Forestry practices 8, 9, 13, 11 and 20 for the tract. Follow Wildlife practice 16 on the edges of all hay fields within these tracts. Follow Wildlife practices 1, 9 and 8 where possible for fields in tract D-314 south of county road; develop 3 east-west rows and along boundary. Follow Wildlife practice 4 in all field corners. Follow Wildlife practice 12 and 14 in Tract #314.

Tract D-318 and D-319Photo 75-CR-E2

1. Description. Both tracts are predominately open with scattered timber in a few draws and brush along three narrow fencelines. Hillside on either side of the bay are moderately timbered. The open fields have been periodically hayed.

2. Prescription. Follow wildlife practice 1 and 9 on east portion of Tract D-319 to break up the field into 5-10 acre plots. Then follow wildlife practice 15 and 17 along all field edges. As for the remainder of D-319 and all of 318, grazing rights should be deleted. Forestry practices 8, 9, 10.

Tract #D-327Photo 75-CR-E2

1. Description. An open field with some edge habitat on the south and east sides.

2. Prescription. Follow Wildlife practices 1 and 9; plant 3 east-west rows and a row along the north and west boundaries. Follow wildlife prac-

tices 15 and 17 along all newly created field edges.

Tract #D-328

Photo 75-CR-E2

1. Description. The tract is predominately within the 712 m.s.l. elevation. The hillsides of the bay are moderately timbered. The two upland areas in the western half of the tract are predominately open with isolated stands of timber and scattered brush.

2. Prescription. Allow natural vegetative succession below elevation 712. Follow wildlife practice 13 on small plots within the 2 upland areas in the western half of the tract to prevent complete take over by woody species so as to maintain as much edge as possible.

Tract #D-329

Photo 75-CR-E2

1. Description. North of dirt road is open field and no edge. South of dirt road is predominately open field with scattered timber in draws. Entire area is hayed on a periodic basis.

2. Prescription. On those areas below elevation 712 allow natural vegetative succession. On the higher areas along the south and east sides employ practice 16. Follow Forestry practices 8, 9 and 10.

Tract #D-330

Photo 75-CR-E2

Follow wildlife practice 1 along the east boundary. Discontinue grazing rights but allow crop production to continue on the small field implementing practices 15 and 17.

Tract #D-334 (PT)

Photo 75-CR-F2

1. Description. The tract is located primarily on uplands west of Hoosier Creek. The best wildlife habitat exists in the northeast corner along both

banks of the creek. Also some tree cover is present along a small drainage way that runs east and west through the center of the tract.

2. Prescription. Follow Wildlife practice 1 and 9 to break up the large upland fields on the west half of the tract. Follow Wildlife practice 15 and 17 on leased land between the windrows and/or hedgerows. Follow wildlife practice 8 to develop a marsh on the area.

The east half of the tract is below elevation 712 and subject to inundation therefore, allow natural vegetative succession in conjunction with forestry practices recommended below.

Follow Forestry practices 8, 9 and 10 on the east half.

Tract #D-335

Photo 75-CR-F2

1. Description. Scattered brush and marsh with stands of bottomland timber. Stream flows along west side.
2. Prescription. Follow Wildlife practice 13. Follow Forestry practices 8, 9 and 10.

Tract #D-336 (PT)

Photo 75-CR-F1

1. Description. This tract has little value to wildlife due to the lack of suitable vegetation. It presently is used entirely for row crop production.
2. Prescription. Allow natural vegetative succession on land between the railroad tracks and country road (delete from agricultural lease).

Follow wildlife practice 1 and 9 along the border and within that portion of the tract east of the RR tracks. Develop 5-6 east-west rows and employ practice 16 on all haying operations between them. Follow wildlife practice



15, 16 and 17 along the borders of the three large fields west of the road.

The remainder of the land west of road should be allowed to revert to native vegetation via succession.

Field No. 9, Delete.

Tract #D-337

Photo 75-CR-E2

1. Description. Field No. 7, 4.5 acres. Open field with no edge.
2. Prescription. Delete lease and follow Wildlife practice 1 and 9 for all edges, and Wildlife practice 4 for corner of triangle furthest from road.

Tract #D-338

Photo 75-CR-F2

1. Description. Open field with good habitat along the north and east edges.
2. Prescription. Follow Wildlife practice 1 and 9 along west boundary and along the elevation 712 contour line. Employ wildlife practice 15 and 17 on leased land between these two limits allow natural succession to occur below elevation 712.

Tract #D-339 (PT)

Photo 75-CR-F2

1. Description. The western third of the tract has good cover. The eastern two thirds presently has little value as wildlife habitat.
2. Prescription. Allow natural vegetative succession for lands between the railroad tracks and road.

Follow Wildlife practice 1 around the edge of the portion of the tract that

lies east of the tracks. Also employ practice 16 on haying operations in this area.

Follow Wildlife practice 1 and 9 on large open field west of the road, developing 3 north-south rows and following practices 15 and 17 on farming. Do not allow grazing in timber on the west side of the tract.

Tract #D-339 (PT), D-348

Photo 75-CR-F2, G2

1. Description. This is a large tract of land located along the upstream reaches of Hoosier Creek. Cover is limited mainly to the southwest corner of the tract.

2. Prescription. Follow Wildlife practice 9 around the perimeter of the triangular shaped portion of the tract which extends northeast of the railroad tracks. Follow wildlife practice 4 in all three corners of the triangle and agricultural practices 16 and 18 employed.

Allow natural vegetative succession on the portion of the tract southwest of the county road.

The remainder of tract consists of large fields situated between the railroad tracks and the county road. This strip of land is bisected by a forked draw. The area inside the fork should be deleted and practice 14 implemented. The fields above and below the draw should be broken up into smaller fields via wildlife practices 1 and 9 and agricultural practices 15, 16 and 17 put in effect for ongoing farm operations.

Tract #D-340

Photo 75-CR-F2

Natural succession of wildlife practice 14 should be employed.

Tract #D-341

Photo 75-CR-F1

1. Description. This tract consists of hay and pasture land. Scattered

timber occupies a good portion of the area.

2. Prescription. Follow Wildlife practice 1 along irregular eastern boundary of the tract. Discontinue all grazing rights. Allow periodic haying of open areas with practice 16 being adhered to.

Tract #D-351 (PT)

Photo 75-CR-G2

1. Description. The creek runs through the middle of the tract. Good shrub and tree cover exists along its banks. Upland areas to the east and west are open fields with little habitat value. Follow wildlife practice 12 along the creek.
2. Prescription. Follow Wildlife practices 1 or 9 along the east and west borders of the tract. Allow haying as necessary on fields to prevent take over by woody vegetation but delay haying until 15 June. Allow existing bottomland trees to mature.

Tracts #E-420, E-421, E-422, and E-423

Photo 75-CR-E3

1. Description. Essentially all of this area is in mature upland hardwoods. The south portion is grazed shrub, with small tree interspersions. The west, north and east boundaries are bordered by extensive hardwoods.
2. Prescription. Follow Wildlife practice 7 along the boundary between 422 and 423 and along the boundary between 420 and 421. After the cut has been made employ wildlife practice 13.

Tract #E-426

Photo 75-CR-E3

1. Description. West hillside predominately timbered with northwest and southwest corners in scattered timber and shrub. Remainder is open with an excellent meadow in the northeast corner.

2. Prescription. Allow natural succession and follow Forestry practices 16 for timbered west hillside. Take field in northeast corner out of agricultural lease and delete from agricultural lease. Follow Wildlife practices 11 every 5 years and practice 5 annually to create a diverse grassland habitat type. Follow practice 12 at two or three sites.

Tract #E-437

Photo 75-CR-E3

1. Description. 20 acres. Entirely hardwood timber. The tract is bordered by timber and meadow on the west edge, timber and inundated draw to the south, field road right of way to the east, and a small patch of timber to the north.

2. Prescription. Wildlife practice 2, should be implemented at one or two small sites within the center of the tract.

Wildlife practice 10 should be implemented if shrub understory growth requires stimulation.

Tract #E-438

Photo 75-CR-E3

1. Description. A small portion of this tract is described as Class II A lands - the Sandy Beach Recreation area. The remainder of land is reserve Class IV. The Class IV portion is bisected by a barren, frequently inundated, northwest-southeast draw. The west side of this draw is divided, by small creek draw, into two groves of nature upland hardwoods. The area east of the main draw is in a shrub and small sapling stage of succession.

2. Prescription. For Class 11 A lands follow Forestry practices 1a, 1b, 2a, 2b, 2c. For Class IV lands; west side follow Wildlife practice 10; specifically, provide den trees, and follow Forestry practices 13 and 20. For east side follow Forestry practices 11 and 20.

Tract #E-419Photo 75-CR-E3

1. Description. Portions of this tract are within both Class II A and IV. The Class II A lands are south of the east-west county road and comprises a portion of the Sandy Beach Recreation area. The Class IV lands are north of the county road. The southeast corner of the Class IV lands are in agricultural lease with excellent edge on three sides. The remainder of the tract is a relatively open draw running from northwest to southeast. The draw is in shrub and sapling growth of bottom hardwoods.
2. Prescription. Follow Forestry practices 1a, 1b, 2a, 2b and 2c. For the Class IV land in agricultural lease and follow Wildlife practice 15 or 16 along all edges (including around each finger).
3. Description. Field #1, 14.5 acres.
4. Prescription. Appropriate practice #10 or 11 for the N and E edges.

These tracts are primarily vegetated with upland hardwoods. Natural succession and selection will be allowed to occur, except Tract E-453 where wildlife practice 7 should be employed to make an opening at each end.

Tract # E-442

F-505

B-310

444

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453

456-459

465-467

469-471

Photo 75-CR-C3, CR-D3

These tracts are primarily vegetated with upland hardwoods. Natural suc-



cession and selection will be allowed to occur, except Tract E-453 where wildlife practice 7 should be employed to make an opening at each end.

Tract #F-550 and F-551

Photo 75-CR-C3

1. Description. Tract F-551 is entirely Class II A while F-550 is within Class II A east of Highway 218 and south of Tract F-551.
2. Prescription. Follow Forestry practices 1a, 1b, 1d, and 2a, 2b, 2c. As a Wildlife practice assure that the triangular field east of 218 which is in agricultural lease remains in hay meadow with periodic seeding. Follow wildlife practices 1 and 4 on Tract #426.

Tract F-541-543, F-558-589, F-538

Photo 75-CR-F4

No treatments recommended, natural succession and selection will be allowed to occur except on open high ground on tract 541 follow wildlife practice 13.

Tracts F-539, F-540, F-587

Photo 75-CR-D4

1. Description. This land is described as the Curtis Bridge Recreation area. The land is extensively timbered with mature upland hardwoods.
2. Prescription. Follow Forestry practice 1a, 1b, and 2a, 2b, 2c.

Tract #F-506 (PT), 507 (PT), 509 (PT)  
510 (PT), and 512 (PT)

Photo 75-CR-D4

1. Description. These tracts consist of an interspersions of meadow and forest habitat types.
2. Prescription. Follow Forestry practices 2a, 2b, 2c, for F-510 and F-512. Follow Forestry practices 1a, 1b, 1c; and 2a, 2b, 2c, for F-506,



F-507 and F-508.

Delete meadow on tract 506 from agricultural lease and employ practice 13 as necessary to prevent woody species from taking over the opening. Follow Wildlife practices 1 and/or 9 on hay meadows above elevation 712 on the north end of Tract 507 and the west side of Tract 508. Follow practice on two or three sites on Tract #507.

Note: It appears deleted area has been hayed or pastured including wild-life plantings. This must be stopped.

Tract #F514

Photo 75-CR-D3

This tract is vegetated with upland hardwoods. No treatment will be done on this tract.

Tract #F-516, 590, 518

Photo 75-CR-E3, 75-CR-E4

This land is vegetated with upland hardwoods. This area will be allowed to develop under natural succession.

Tract #F-517

Photo 75-CR-E4

1. Description. 141 acres. Very good pheasant and quail habitat. Six meadow fields interspersed among shrub and young tree growth. Previous to 1975 it was grazed; this lease has expired and will not be renewed. This tract is bordered to the south by the reservoir and to the west and north by agricultural land; and to the east by hardwood timber.

2. Prescription. Follow Forestry practices 11, 13, and 20. Follow Wildlife practice 5 at several plots on the tract and practice 16 during all haying activities. Follow practice 12 at several plots on the tract.

Tract #F-520

Photo 75-CR-D4

1. Description. This north-south creek draw is young bottomland hardwoods with open shrub and sapling growth.
2. Prescription. Follow Forestry practice 13.

Tract #F-522 and F-523

Photo 75-CR-D4

1. Description. The area is predominately open with good edge. Three fields are leased for agriculture; each as a hay meadow.
2. Prescription. Discontinue haying of lands below elevation 712 and allow natural vegetative succession. Above elevation 712 continue haying operations with practice 16 being employed. Follow practice 12 at a few sites on these tracts.

Tracts #F-523 (PT), F-524, F-532, F-533,  
F-534, F-535 N. Hwy. 218

Photo 75-CR-D4

1. Description. Predominately grass meadow with good shrub and sapling interspersions. Excellent edge habitat.
2. Prescription. Follow Forestry practices 11, 13, 18, and 20. Follow wildlife practice 12 on several sites west of I-380 on Tract 534.

Tract #F-579

Photo 75-CR-D4

1. Description. The reserve forest portion of this tract is north of Highway 218. The east-west strip is road right-of-way. The north-south band predominately open with shrub and small saplings. It appears adjacent farming had encroached.
2. Prescription. Insure that this area remains idle. Brush clearing may be required in future years to maintain open areas.

Tract #F-581, #F-546Photo 75-CR-D4

No treatment, natural succession.

Tract #F-582 (PT)Photo 75-CR-D4

1. Description. Field No. 1, 14 acres. Presently in meadow, good edge habitat. North half of the tract is in mature oak-hickory. N. Hwy. 218.
2. Prescription. Field No. 1, follow appropriate Wildlife practice 15, 16 or 17 for the north and west edge. For timber area follow Forestry practice No. 17, 20 and Wildlife practice No. 1.

Tracts

F  
536, 539, 544  
547-551  
557-564  
569-572  
574-578  
583-586

G  
605, 606  
608-621  
623  
631-639  
644  
646-659  
666-672  
675, 676  
678-690

H  
701  
705-728  
733, 734  
736-638  
759, 762-770  
743, 754

I

802, 804-812  
814, 821, 824-827

Photo 75-CR-B5, 75-CR-B6,  
75-CR-C4, 75-CR-C8  
75-CR-D4, 75-CR-D8  
75-CR-E4, 75-CR-E5

These lands are licensed to the Iowa Conservation Commission for wildlife management. We coordinated our suggestions for management in this area with Mr. Don Pfieffer of the ICC. The five-year development plan initiated by the ICC will be implemented in this area. We decided to add Timber Stand Improvement (wildlife practice 10) in 550 acres of Tracts I827, I824, I810, I809, I802, I805 and H765 to the plan if funds become available.

## LAND TREATMENT MAPS

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